The Psychology of Loot: Comparing RNG in RPGs and Casino Games

While many people think comparing casino games with traditional video games is a stretch, the truth is that both rely on similar mechanics. Whether it’s an RPG featuring random loot drops as part of the action or a fast-paced FPS game focused entirely on PvP, there’s always an algorithm deciding the outcome of actions.

No matter how skilled a player is or how much they attempt to exert control, a system like a RNG (Random Number Generator) still plays a part in shaping results. So what can players actually do if they only have an illusion of complete control? Simply make the most of whatever chance throws their way, and that applies to both casino and video games.

What Determines Outcomes in Online Games?

A sense of fairness always matters when playing games. With online casinos, for example, it starts with choosing a licensed platform based on casino reviews, because that ensures the operator’s games have passed rigorous fairness checks. An RNG is pivotal for this, as the algorithm draws numbers and uses them to determine certain results in the game. In video games, you usually notice how fair things feel after a few sessions. But how are these outcomes actually decided?

Almost every outcome in a casino game happens through an RNG, notably in slots, which rely entirely on randomness. Randomness is important as it means that all players have an equal chance of winning from a single spin.

Even though in RPGs, players do have control over things like movement and action decisions, RNGs still make their presence felt. It shows up when calculating rare loot drop rates, damage variation, or the chance of landing a critical hit. Video games leave far more room for player skill, as it’s the main factor behind performance.

RNG and PRNG in Games

In both video games and online casinos, the term RNG is used as a general label for any random number generator. However, there are two main types:

TRNG (true random number generator) - This relies on physical phenomena to produce real randomness and is commonly used in fields such as cryptography and digital security.

PRNG (pseudorandom number generator) - Where TRNG depends on physical hardware and isn’t practical for everyday use, many industries, including video games and iGaming, rely mostly on PRNG. A PRNG requires a seed, an initial value taken from something like the system clock, the moment a session starts, memory state, or even the exact frame when an action happens, to produce sequences that appear random.

This doesn’t mean outcomes are rigged, as in practice, the results remain unpredictable. In licensed online casinos, this process is tightly audited by organisations such as eCOGRA and GLI, ensuring operators cannot manipulate results. In video games, there’s no such external audit. Studios pick well-known PRNGs, tune them however they see fit, and test everything in-house.

In some older RPGs, players discovered that actions like moving around, changing direction, or simply waiting for a few frames could shift the next generated number, which speedrunners learned to exploit. Modern systems, however, make this far harder to predict because they blend more variables, making PRNG behaviour much more complex.

When the Human Brain Meets Loot and RNG

The simple truth is that people dislike uncertainty and gravitate toward patterns. When we try to link action X to outcome Y, reinforcement kicks in. An action that leads to a positive reward is likely to be repeated, even if the player isn’t fully aware of it. In practice, discussions about game psychology therefore usually come down to two points:

1. The human brain dislikes randomness. It looks for patterns to feel secure.
2. Reinforcement and reward are basic parts of how we operate.

People tend to look for patterns anywhere, and even casino players do this. Despite knowing that game outcomes are completely random, people seek patterns to give the belief that they have control and that their actions will determine the outcome.

Denying randomness often leads to superstitions about “lucky numbers” or belief in the well-known near-miss effect, where a player almost wins and feels the urge to try again, believing there’s some hidden logic behind it.

RPGs Take This to the Extreme

In RPGs, this effect becomes even stronger because actions really do produce direct rewards. You can train, upgrade gear, level up skills, and increase your XP, so choices genuinely matter. But that doesn’t mean that where and when a loot drop happens, or what the damage variation is on an attack, isn’t random.

This mix of real control and fully random events creates a more complex psychological environment for players. When meaningful player actions combine with unpredictable outcomes, the reinforcement becomes even stronger, known in psychology as intermittent reinforcement.

More Variability, More Need for Control

Some players may feel discouraged when they face too much unpredictability, and their craving for more control increases. Every type of game, whether it involves betting or not, relies on a balance between a sense of achievement, randomness and rewards.

There’s no real progression or earned advantage on slots and games like video poker, because it’s simply luck with no skill involved. All wins and losses are

merely down to random chance, while in traditional video games, players face the same kind of uncertainty over whether they will get a potentially game-changing loot box drop or not.